

WHAT IS CLAIMED IS:

1. A computer with a touch sensitive or pen sensitive display, wherein the position of the fully opened display is such that the maximum torque typically applied to the top most pen or touch sensitive part of the display, in relation to a rotational axis about which the computer would rotate if it were to tip backwards, is less than  
5 that needed to cause the computer to tip backwards about that rotational axis, but would be sufficient to cause such tipping if the display were hinged in a conventional clam shell arrangement at the rear of the computer.

2. The computer of Claim 1, wherein the torque is less than that needed  
10 to cause tipping because the length of the moment arm, i.e. the length of the distance from the point of application of the turning force to the rotational axis, is less than the length of the moment arm would be if the display were hinged at a fixed point at the rear of the computer in a conventional clam shell arrangement.

3. The computer of Claim 2, wherein the length of the moment arm is  
15 reduced by using a hinge that will cause the display, when fully opened, to be displaced forward from, but substantially parallel to, an ordinary, open position it could be in if the display were hinged at a fixed point at the rear of the computer.

4. The computer of Claim 3, wherein the torque is less than that needed  
20 to cause tipping for the further reason that the center of gravity of the computer has been displaced forward, thereby increasing the magnitude of the torque resisting backwards tipping.

5. The computer of Claim 2, wherein the length of the moment arm is  
25 reduced by using a hinge that will cause the display, when fully opened, to be displaced downwards from, but substantially parallel to, an ordinary, open position it could be in if the display were hinged at a fixed point at the rear of the computer.

6. The computer of Claim 2, wherein the length of the moment arm is  
reduced by extending the rear of the computer.

7. The computer of Claim 6, wherein the extension is achieved using  
rearward feet which are permanent.

8. The computer of Claim 6, wherein the extension is achieved using  
30 rearward feet which extend back as the display opens up.

9. The computer of Claim 6, wherein the extension is achieved using rearward feet which are manually extendible.

10. The computer of Claim 1, wherein the display has pen and touch sensitive buttons, regions, or drop-down menu items which are positioned at or near the top most part of the display.

11. The computer of Claim 1, further comprising a keyboard which extends forward as the display is raised and which tilts slightly towards the user during its extension.

12. The computer of Claim 11, wherein the torque typically applied to the part of the keyboard closest to the user, in relation to a rotational axis about which the computer would rotate if it were to tip forwards, is less than that needed to cause the computer to tip forward about that rotational axis.

13. The computer of Claim 1, wherein the computer is of a size to be classified as a palmtop computer.

14. The computer of Claim 1, wherein the computer is of a size to be classified as a sub-notebook computer.

15. The computer of Claim 1, wherein the computer is of a size to be classified as a notebook computer.

16. The computer of Claim 1, further comprising a keyboard, in which a casing for the display has similar dimensions in plan to the keyboard so that in the closed position the casing for the display substantially covers the keyboard.

17. The computer of Claim 1, further comprising a base and a casing for the display in which the rear of the fully opened casing rests directly upon a part of the base.

18. A computer with a touch sensitive or pen sensitive display, wherein the position of the fully opened display is such that the maximum torque typically applied by a finger or a pen to the top most pen or touch sensitive part of the display, in relation to a rotational axis about which the computer would rotate if it were to tip backwards, is less than that needed to cause the computer to tip backwards about that rotational axis, and further including a hinge that allows the base of the display to move forwards during either opening or closing.

19. The computer of Claim 18, wherein the display has pen and touch sensitive buttons, regions, or drop-down menu items which are positioned at or near the top most part of the display.

5 20. The computer of Claim 18, further comprising a base and a casing for the display in which the rear of the fully opened casing rests directly upon a part of the base.

21. A microprocessor controlled device comprising:

a base having a front edge and a back edge;

10 a touch or pen sensitive screen having a top and a bottom, said screen mounted to said base when in a viewing position at an angle which is tilted with respect to the base; and

15 wherein at least a portion of the screen is positioned inward from a rotational axis of the base when in a viewing position, the equivalent torque of the portion of the screen positioned inward from a rotational axis of the base combined with the equivalent torque of the base being at least 30 percent greater than the equivalent torque of the portion of the screen positioned outward of the back edge combined with the torque from a typical force applied perpendicular to the screen at a top most touch sensitive portion of the screen, thereby preventing the screen and base from tipping over when the base is on a flat surface and the base is not permitted to slide rearwardly, and  
20 wherein any force of more than 220 percent of the typical force applied perpendicular to the screen at a top most touch sensitive portion of the screen causes the screen and base to tip.

22. The microprocessor controlled device of Claim 21, wherein the typical  
25 force is approximately 80g-forces.

23. The microprocessor controlled device of Claim 21, wherein the device is a palmtop computer.

24. The microprocessor controlled device of Claim 21, wherein the device is a sub-notebook computer.

30 25. A microprocessor controlled device comprising:

a base having a front edge and a back edge, said base having a first weight;

5 a touch or pen sensitive screen having a top and a bottom, said screen mounted when in a viewing position to said base at an angle which is tilted with respect to the base, the screen having a second weight being no less than 33 percent of the first weight; and

10 wherein the bottom of the screen is positioned between the front edge and the back edge of the base, and said screen further positioned such that when any force of up to 220 percent of a typical force is applied perpendicular to the screen at a top most touch sensitive portion of the screen the base and the screen do not tip over when the base is on a flat surface and the base is not permitted to slide rearwardly.

26. The microprocessor controlled device of Claim 25, wherein the typical force is approximately 80g-forces.

15 27. The microprocessor controlled device of Claim 25, wherein the first weight is approximately 245 grams.

28. The microprocessor controlled device of Claim 25, wherein the second weight is approximately 107 grams.

20 29. The microprocessor controlled device of Claim 25, wherein the device is a palmtop computer.

30. A microprocessor controlled device comprising:

a base;

25 a touch or pen sensitive screen having a length and width defining a screen area, said screen mounted when in a viewing position to said base at an angle which is tilted with respect to the base;

said screen mounted to the base so that at least 30 percent but not more than 80 percent of the screen area is positioned directly above the base; and

30 said screen positioned such that when any force of up to 220 percent of a typical force is applied perpendicular to the screen at a top most touch sensitive portion of the screen, the screen and base do not tip over when the base is on a flat surface and the base is not permitted to slide rearwardly.

31. The microprocessor controlled device of Claim 30, wherein the typical force is approximately 80g-forces.

32. The microprocessor controlled device of Claim 30, wherein the device pivots about feet mounted to the base.

5 33. The microprocessor controlled device of Claim 30, wherein the device is a palmtop computer.

34. The microprocessor controlled device of Claim 30, wherein the device is a notebook computer.

35. A microprocessor controlled device comprising:  
10 a base having a length and a width, said base adapted to rest on a horizontal flat surface;

a touch or pen sensitive screen mounted to said base at an angle which is tilted with respect to said base to permit easy viewing of the screen; and

15 said screen being positioned with respect to the base such that a line perpendicular to the screen and passing through the top most touch sensitive portion of the screen also passes through the base.

36. The microprocessor controlled device of Claim 35, wherein the angle is in a range of 21 degrees to 31 degrees.

20 37. The microprocessor controlled device of Claim 35, wherein the angle is 26 degrees.

38. A method of positioning a pen or touch sensitive display with respect to a computer to prevent tipping, the method comprising the acts of:

providing a base having a front edge and a back edge;

25 orienting the display at an angle to the base to provide for viewing, wherein a bottom of the display is positioned between the front edge and the back edge of the base such that a torque typically applied to the top most pen or touch sensitive part of the display is less than that needed to cause the computer to tip about a rotational axis, but would be sufficient to cause tipping if the display were hinged in a conventional clam shell arrangement at the back  
30 edge of the base.

39. A method of designing a computer with a touch sensitive or pen sensitive display, comprising the steps of arranging the position of the fully opened display such that the maximum torque typically applied to the top most pen or touch sensitive part of the display, in relation to a rotational axis about which the computer would rotate if it were to tip backwards, is less than that needed to cause the computer to tip backwards about that rotational axis, but, if the display were hinged in a conventional clam shell arrangement at the rear of the computer would be sufficient either to cause such tipping or to cause the display to be rotated away from a normal viewing position.

40. The method of Claim 39, wherein the computer is a palm top computer and the force associated with the torque typically applied to the top most pen or touch sensitive part of the display is 80 g-force.

41. The method of Claim 39, wherein the step of arranging is achieved by using a hinge that will cause the display, when fully opened, to be displaced forward from, but substantially parallel to, an ordinary, open position it could be in if the display were hinged at a fixed point at the rear of the computer.